

Use Attainability Analysis
for
Water Body Identification # 2985
Turkey Creek

Conducted by:
Environmental Resources Coalition

To:
Missouri Department of Natural Resources
Water Protection Program

Submitted: July 14, 2005



Stream Description – WB ID: 2985 – Turkey Creek

Turkey Creek (WB 2985) is a two and one half mile long class C stream and is a tributary to Mingo Creek. The creek is located in the northwestern edge of Mississippi Lowlands physiographic region (Thom and Wilson 1980), which is characterized by rich alluvial soil and relatively level topography.

Turkey Creek is located in northwestern Stoddard County just southwest of Puxico, Missouri. The classified stream reach begins just south of Puxico and ends at its mouth near Highway T. Approximately two miles of the two and one half mile classified reach is downstream of the Puxico WWTF (MO0055158). The second outfall (Mingo Job Corps STP – MO0100404) is located between assessment sites two and three. The surrounding conditions of the creek include crop land, wetlands (Mingo National Wildlife Refuge) and a few rural residences.

Thom, R. H. and J. H. Wilson. 1980. The Natural Divisions of Missouri. Trans. Mo. Acad. Sci. 14: 9-23.

Note: During the first visit to each site, ERC selected an assessment location (either upstream or downstream) based on which side appeared deepest and or most likely for whole body recreation.

Field Data Sheets for Recreational. Use Stream Surveys

Data Sheet A: Water Body Identification

Water Body Name: Turkey Creek
8 – digit HUC: 08020203
Missouri WBID # 2985
County: Stoddard
Upstream Legal Description: Sec. 34, T27N, R8E, Stoddard County
Downstream Legal Description: Sec. 4, T26N, R8E, Stoddard County (at stream mouth)
Upstream Coordinates: Latitude 36.9460029 ° N , Longitude 90.1690152 ° W
Downstream Coordinates: Latitude 36.9345437 ° N , Longitude 90.1975083 ° W
Discharger Facility Name(s): Puxico WWTF and Mingo Job Corps STP
Discharger Permit Number(s): MO0055158 and MO0100404
Number of Sites Evaluated: 3
Name of Surveyor and Telephone Number: Robert R. Bacon, (573) 634-7078
Organization: Environmental Resources Coalition (ERC)
Position: Director of Aquatic Services

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA sheet is true and accurate.

Signed: _____

Robert R. Bacon

Date: _____

7-14-2005

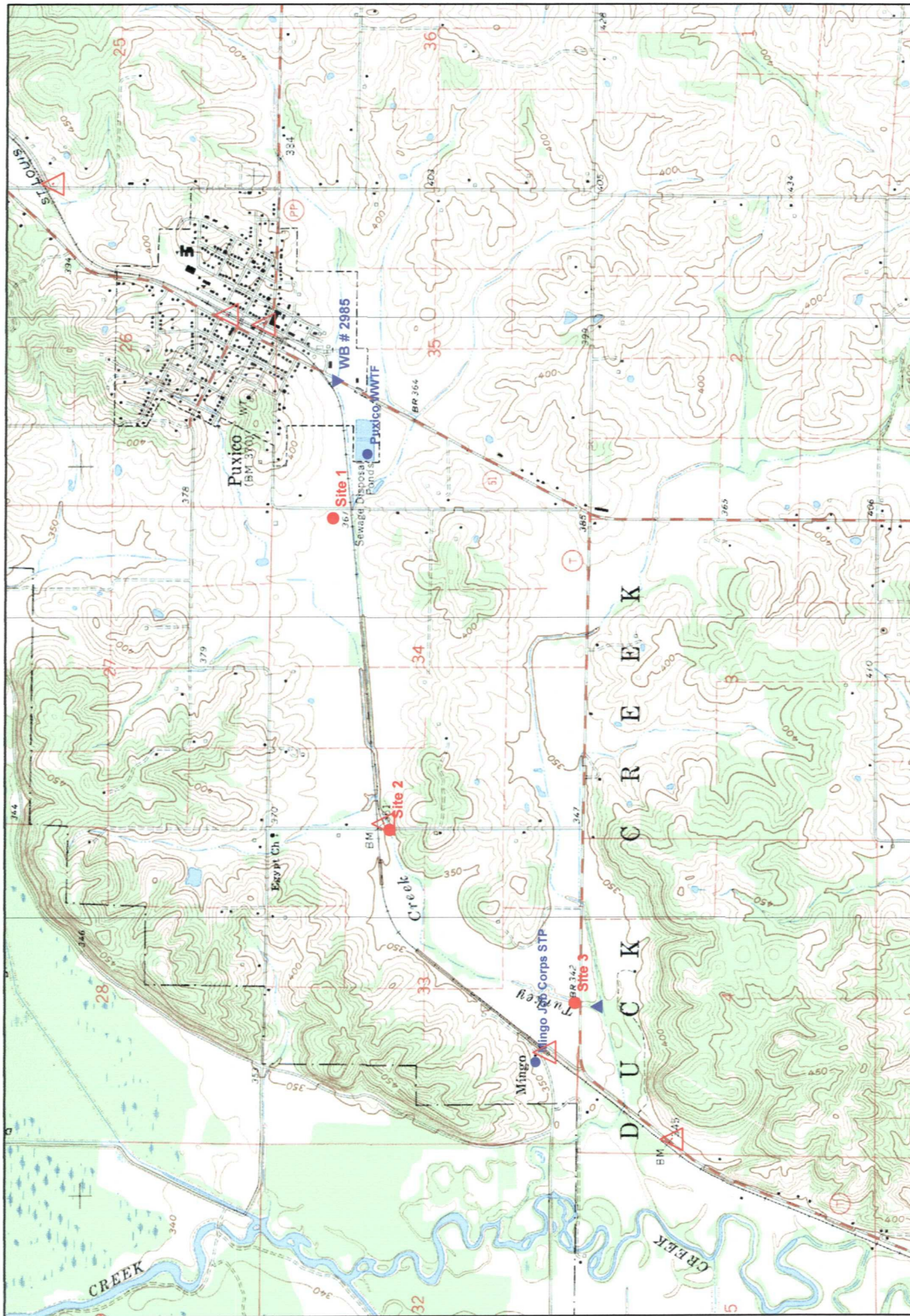
Weather Conditions

Weather for the each of field surveys dates and the previous ten days is listed in the tables below.

Data from the Midwestern Regional Climate Center
Wappapello Dam, Missouri, Station ID: 238700

Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Average Temp (°F)
04/04/2005	0	35	76	56
04/05/2005	0	48	76	62
04/06/2005	0.19	52	75	64
04/07/2005	0.07	56	66	61
04/08/2005	0.25	51	64	58
04/09/2005	0	47	75	61
04/10/2005	0	-	-	-
04/11/2005	0	54	80	67
04/12/2005	0.95	56	66	61
04/13/2005	0.09	52	69	61
04/14/2005	0	41	57	49

Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Average Temp (°F)
05/22/2005	0.09	57	77	67
05/23/2005	0.11	62	87	75
05/24/2005	0	56	90	73
05/25/2005	0	53	80	67
05/26/2005	0	54	80	67
05/27/2005	0	54	83	69
05/28/2005	0	51	85	68
05/29/2005	0	52	85	69
05/30/2005	0	54	87	71
05/31/2005	0	56	87	72
06/01/2005	0	61	-	-



Name: PUXICO
Date: 7/8/2005
Scale: 1 inch equals 2000 feet

Location: 036.9408367° N 090.1777954° W

WB # 2985 – Turkey Creek

Site # 1 - County Rd 291

GPS Location

**36.94672 North
90.169525 West**

Elevation (feet)

417.5

Upstream Views

04/14/05



06/01/05



Downstream Views

04/14/05



06/01/05



Physical Dimensions – Site # 1

	04/14/05	06/01/05
Assessment Location	Downstream	Downstream
Time	4:45 PM	3:30 PM
Stream Type	Riffle	Riffle
Width (m)	4.88	4.57
Length (m)	13.12	13.12
Ave Depth (cm)	8.98	9.25
Maximum Depth (cm)*	20.3	21.0
Flow Present	Yes	No
Flow (cfs)	1.01	-

SUBSTRATE

Cobble	0%	10%
Gravel	25%	0%
Sand	0%	0%
Silt	25%	0%
Mud / Clay	50%	90%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	None	None

Water Characteristics

Odor	Musky	Stagnant / trash smell
Color	Turbid (dark brown)	Turbid
Bottom Deposits	None	None
Surface Deposits	None	Scum

* Maximum depth is maximum measured depth within the stream cross-section

NOTES: Site # 1 uppermost point on Turkey Creek

WB # 2985 – Turkey Creek

Site # 2 - County Rd 295 (Eygypt Church Rd)

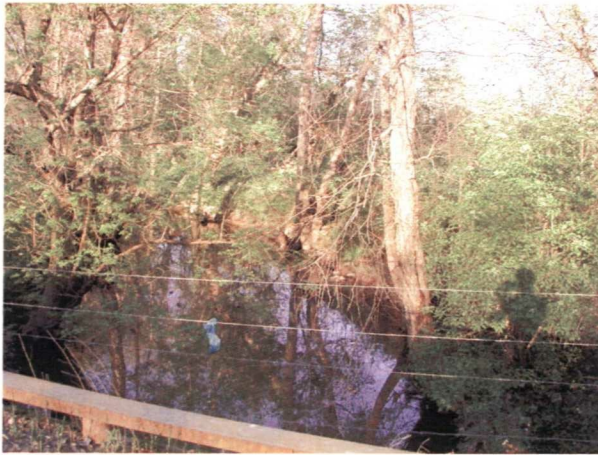
GPS Location

36.9441431 North

90.1875223 West

Upstream Views

04/14/05



06/01/05



Downstream Views

04/14/05



06/01/05



Physical Dimensions – Site # 2

	04/14/05	06/01/05
Assessment Location	Downstream	Downstream
Time	4:55PM	3:17 PM
Stream Type	Pool	Pool
Width (m)	5.03	6.25
Length (m)	30.48 +	30.48 +
Ave Depth (cm)	25.15	33.67
Maximum Depth (cm)*	45.7	59.0
Flow Present	Yes (very slow)	No
Flow (cfs)	1.16	-

SUBSTRATE

Cobble	0%	70%
Gravel	5%	20%
Sand	0%	0%
Silt	25%	10%
Mud / Clay	70%	0%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	None	Periphyton on rocks

Water Characteristics

Odor	Musky	Stagnant
Color	Turbid (dark brown)	Turbid
Bottom Deposits	None	None
Surface Deposits	Organic foam	None

* Maximum depth is maximum measured depth within the stream cross-section

NOTES:

WB # 2985 – Turkey Creek

Site # 3 - Off Hwy T

GPS Location

**36.9355395 North
90.1974222 West**

Upstream Views

04/14/05



06/01/05



Downstream Views

04/14/05



06/01/05



Physical Dimensions – Site # 3

	04/14/05	06/01/05
Assessment Location	Upstream	Upstream
Time	5:25 PM	3:44 PM
Stream Type	Pool	Run
Width (m)	3.81	3.05
Length (m)	76.20 +	60.96
Ave Depth (cm)	24.40	20.82
Maximum Depth (cm)*	40.6	34.0
Flow Present	No	No
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	0%	0%
Sand	0%	0%
Silt	50%	100%
Mud / Clay	50%	0%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	None	algae

Water Characteristics

Odor	Musky, sewage	Musky
Color	Turbid (dark brown)	Turbid
Bottom Deposits	Sludge / fine sediments	None
Surface Deposits	Organic foam	Oily film

* Maximum depth is maximum measured depth within the stream cross-section

NOTES:

Site Descriptions

Site #1: Site #1 of Turkey Creek is located on County Road 291, and near the uppermost site of the reach. The stream has steep sloping banks and multiple no trespassing signs, as well as purple paint on trees indicating no trespassing. The water body has a variety of trash dumped into it, including car batteries, fans, dead animals, and concrete slabs with re-bar sticking out. On assessment dates several snakes were observed and the surface of the water had areas floating scum.

Site #2: Site #2 of Turkey Creek is located on County Road 295. At this location there is approximately 170 feet of the stream that is accessible by the roadway. The upstream side of this stream is entirely fenced off. This site has steep banks making access to stream difficult. The surrounding area is composed primarily wooded areas and farm pastures. The water body has a lot of trash dumped in it including broken beer bottles. Concrete slabs with visible re-bar line some of the bank and bed of the stream.

Site #3: Site #3 of Turkey Creek is located on Highway T, and is surrounded by farm fields and wooded areas. There was trash in the stream possibly from upstream sites and from traffic on Highway T. A large amount of woody debris has collected at this site due to the road culvert. During field assessments this site the water surface of the stream had either organic foam or oily film present.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on the UAA datasheets for sites, are true and accurate.

Signed: Robert D. Bacon

Date: 7-14-2005

Organization: ERC

Position: Dir. of Aquatic Services

Summaries of Interviews

The following interviews were conducted by Abby Welschmeyer and Anna Welschmeyer with landowners and creek users during the month June of 2005. Questions were asked of the interviewee either in person or over the phone. Survey sheets were completed based on the information acquired by the interviewer. The questions asked are as follows:

- How long have you lived near this body of water?
- Do you or your family utilize this body of water for recreational activities?
- If not used, why?
- If used, what types of activities, what seasons, how many times per period, and what flow conditions (low, medium, or high)?
- Have you witnessed other people utilizing the water body? (If so, the aforementioned questions apply.)

To assist in the collection of interviews letters were developed detailing the water quality rule, our affiliation with the Missouri Department of Natural Resources and our contact information. These letters were left at residences nearby the water body where nobody answered the door. This turned out to be a very effective way of quickly collecting key interviews of people most familiar with the resource.

Date: 06/01/05

Time: 4:03 PM

Name: Aimee Faries

Reason for Interview: lives near site #1

Aimee Faries has lived near site #1 of Turkey Creek for five years. She said she does not use the stream for recreational activities, commenting the nickname of the stream is “Nasty Creek,” and stating that you “could catch something in there.” Ms. Faries also commented that she has never seen anyone else use the water body because it is “too nasty.”

Date: 06/01/05

Time: 4:00 PM

Name: Barbara Dirickson

Reason for Interview: lives near site #1

Barbara Dirickson has lived near Turkey Creek for 30 years. She said she does not use the stream because people dump their trash in it and she would never go down there because it is “nasty.” Ms. Dirickson also stated that she has never seen anyone recreating in the water body and claimed that no one ever would use it for recreation.

Summaries of Interviews (cont'd)

Date: 06/01/05

Time: 5:00 PM

Name: Renee Hale

Reason for Interview: lives near site #1

Renee Hale has lived near Turkey Creek for one year. She said she does not use the stream for recreation because it is unclean. She stated that she has not seen other people using the stream, probably for the same reason she does not use it.

Date: 06/01/05

Time: 4:18 PM

Name: Larry Barnfield

Reason for Interview: lives near site #1

Larry Barnfield has lived near Turkey Creek for 31 years. He stated he does not use the stream for recreation because it is too nasty. He claimed that in the summer it smells rancid and the water from the WWTF is green, both of which have contributed to the nickname "Nasty Creek." Mr. Barnfield said he has never seen anyone recreate in the water body, and that people use it for a dump trash, but no one has ever been caught.

Date: 06/01/05

Time: 4:32 PM

Name: Dale Gregory

Reason for Interview: lives near site #2

Dale Gregory has lived near Turkey Creek for two and a half years. He said he does not use the stream for recreation and that it is not fit for fishing because so many people dump their trash in it. Mr. Gregory also said he has never seen anyone use the stream for recreation, nor has he seen anyone dumping, but knows that it happens.

Date: 06/01/05

Time: 4:40 PM

Name: Melissa Rawlings

Reason for Interview: lives near site #2

Melissa Rawlings has lived near Turkey Creek for six years. She does not use the stream for recreational activities because she has a pool in her backyard, and she knows that the Puxico WWTF dumps into the water body. Ms. Rawlings said she has never seen anyone use the stream for recreation because it is polluted due to the WWTF dumping into it.